

NSDL EduPak: An Open Source Education Repository Solution

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Abstract

Educational organizations and institutions focused on establishing specialized digital collections, conducting educational research, or providing students, teachers and instructors with discipline-oriented pedagogical products and tools require basic technology to begin building educational digital repositories. To help meet these needs, the National Science Digital Library (NSDL) has announced the release of NSDL EduPak. Specifically designed for education, NSDL EduPak packages technology for digital storage, access, and workflow into a convenient bundle. This poster reviews three core EduPak components with examples of how they are used by education communities.

Overview

NSDL EduPak is lightweight version of NSDL Ncore, an open-source platform of technology and standards that create a dynamic information layer on top of library resources. Based on [Fedora](#) open source repository software, NCore provides systems for description, organization, interrelation and annotation of resources. NSDL EduPak is an all-in-one, open source, education digital repository solution bundle providing a general platform for building digital libraries united by a common data model and interoperable applications. NSDL EduPak components in this first release include:

Digital Repository (DR): The DR uses [Fedora](#) 2.2.4 to model and manage digital objects such as resources, metadata and agents. Fedora provides digital object and repository administrative functions as well as flexible, extensible views of the repository and its digital objects via web services.

NSDL Collection System (NCS): The NCS creates and manages collections of metadata within a DR. The NCS is a flexible XML schema-driven tool that provides a full-featured metadata editor, collection workflow processes, and a role-based permission system in support of distributed and collaborative collections management. The NCS transparently writes metadata and collection-level information to a DR using the NCore Application Programming Interface (API) to enable collection developers to create and manage collections of metadata describing educational resources such as learning objects, user-provided comments and reviews, scientific data sets, and other curricular components.

Search: The Digital Discovery System (DDS) application provides search and retrieval services for resources that reside in a DR. The application provides Web 2.0 services and APIs that are optimized to support the rapid construction of audience-specific portals and applications and can be flexibly configured to search over any XML schema structure. A range of information retrieval features are available from the services including textual and field-based searches such as audience, subject, resource type or content standard. DDS also provides geospatial search capabilities that can be used with geographic applications such as Google Maps.

About NSDL

In 2000, the National Science Foundation created the National Science Digital Library (NSDL.org) to provide organized access to high quality resources and tools that support innovations in teaching and learning at all levels of science, technology, engineering, and mathematics (STEM) education. In addition to providing an organized point of access to high-quality STEM content, NSDL also provides open-access, non-proprietary tools to stimulate new ways to access and use scientific information in an easily accessible online environment.

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